

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

520,181

REC'D	29 OCT 2004
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Applicant's or agent's file reference PC-21004651	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/07552	International filing date (day/month/year) 11.07.2003	Priority date (day/month/year) 15.07.2002
International Patent Classification (IPC) or both national classification and IPC B05C11/04		
Applicant BTG ECLEPENS S.A.et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 05.02.2004	Date of completion of this report 28.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Krysta, D Telephone No. +49 89 2399-2942



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/07552**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-17 received on 20.03.2004 with letter of 17.03.2004

Drawings, Sheets

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
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International application No. **PCT/EP 03/07552**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-17
	No: Claims	
Inventive step (IS)	Yes: Claims	1-17
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-17
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/07552

Point V:

1. State of the art:

Coating blade for the application of coating color onto a travelling web.

2. Object:

Reducing or eliminating dry friction between the blade and the travelling web during the web loading phase.

3. Solution:

Applying a sacrificial layer covering the edge section of the blade, wherein said sacrificial layer is adapted to disappear, when using the blade, as a result of the arrival of the coating color at the coating blade.

Such a disappearing sacrificial layer according to independent claims 1 and 11 is neither known from nor suggested by the available state of the art.

Further Remarks:

1. The description is not adapted to the claims and the nearest state of the art is not cited (Rule 5 PCT).
2. The features of the claims are not provided with reference signs (Rule 6 PCT).

7-10-2004

CLAIMS

1. Coating blade for the application of coating color onto a travelling web, said blade having an edge section with a profile conformed to the surface of said web when in engagement therewith, c h a r a c -
5 t e r i z e d b y a sacrificial layer covering at least said section and protecting the underlying edge section during the web loading phase, wherein said sacrificial layer is adapted to disappear, when using the blade, as a result of the arrival of the coating color at
10 the coating blade.

2. Coating blade according to claim 1 for use in the application of an aqueous coating color, wherein said sacrificial layer is soluble in water and otherwise compatible with said coating color.

15 3. Coating blade according to claim 1 or 2, wherein said sacrificial layer is substantially non-hygroscopic.

4. Coating blade according to any one of the preceding claims, wherein said sacrificial layer is constituted by a material selected from water-soluble polymers and
20 polysaccharides capable of forming a film.

5. Coating blade according to claim 4, wherein said material is selected from acrylic or methacrylic polymers and copolymers and their salts.

25 6. Coating blade according to claim 4, wherein said material is selected from anionic copolymers on the basis of Acrylic acid, Acrylic ester and Acrylonitrile.

7. Coating blade according to claim 4, wherein said material is selected from film-forming polysaccharides.

30 8. Coating blade according to claim 7, wherein said material is selected from hemi-celluloses, plant gums, cellulose and derivatives thereof, starch and derivatives thereof, microbial polysaccharides, algal polysaccharides, and chitosan and derivatives thereof.

35 9. Coating blade according to claim 8, wherein said material is selected from ethyl cellulose, hydroxyethyl cellulose and carboxymethyl cellulose.

10. Coating blade according to any one of the preceding claims selected from steel blades, hard-tipped blades, and soft tipped blades.

11. A method of preparing a coating blade for the application of coating color onto a travelling web, said blade having an edge section with a profile conformed to the surface of said web when in engagement therewith, comprising the following steps for providing the blade with a sacrificial layer protecting said edge section during a web loading phase:

- a) preparing a solution containing a material capable of forming a film on evaporation of solvent;
- b) applying said solution onto at least said section; and
- c) allowing the applied solution to dry so as to form, on at least said section, a solid film having a thickness of 100 μm to 700 μm ;

wherein the sacrificial layer is adapted to disappear, when using the blade, as a result of the arrival of the coating color at the coating blade.

12. A method according to claim 11, wherein step c) includes heating to an elevated temperature.

13. A method according to claim 11 or 12, wherein the solution is applied in several layers with intermediate heating between the application of each layer.

14. A method according to any one of the claims 11 to 13, wherein under step a) an aqueous solution is prepared which contains a polysaccharide in a concentration of at most about 10% by weight.

15. A method according to claim 14, wherein said concentration is from about 1% to about 7% by weight.

16. A method according to any one of the claims 11 to 13 wherein under step a) an aqueous solution is prepared which contains an anionic copolymer on the basis of acrylic acid, acrylic ester and acrylonitrile in a concentration of at most about 40% by weight.

17. A method according to claim 16, wherein said concentration is about 15% to about 30%.